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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/730,944

## Applicant(s)

KAKU, TOSHIHIKO

## Examiner

ERIC RUSH

## Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 24-27 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. This action is responsive to the amendments and remarks received 15 January 2009. Claims 1 - 27 are currently pending.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the amendments entered 15 January 2009 claim 21 has been amended to further define the identification step search for face images stored in a storage section that match *a face* in the recognized face. The Examiner cannot find support for the newly amended claim limitation in the original disclosure, the original disclosure solely defines the step of identification being based on face portions, the eyes and positions, and not on a face as now claimed, and as such the claims are rejected under 112 first paragraph as new matter.

4. The rejections to claims 1 and 3 - 6 under 35 U.S.C. 112, first paragraph, are withdrawn in view of the amendments and remarks received 15 January 2009.

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 2, 8 - 10, 20 - 22, 24 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuersich et al. U.S. Publication No. 2003/00440070 A1, further in view of Okano et al. U.S. Patent No. 6,404,903 and further in view of Nesterov et al. U.S. Patent No. 6,890,691.

- With regards to claim 1, Fuersich et al. teach a face recognition method for recognizing face portions in an image based on image data of the image, comprising: a detection step of detecting, in the image, eye portions which have undergone a predetermined color change, based on the image data; (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050) a recognition step of recognizing face portions in the image based on the eye portions detected in the detection step. (Fuersich et al., Figs. 1A, 1B, & 1C, Page 6 Paragraph 0054) Fuersich et al. fail to teach an identification step of identifying an individual person being photographed based on a face in the face portions recognized in the image and an inducing step of inducing the predetermined color change to occur in the

eye portions of the image. Okano et al. teach an identification step of identifying an individual person being photographed based on the face portions recognized in the image. (Okano et al., Abstract, Fig. 1, Fig. 2, Column 9 Lines 30-44, Okano et al. teach identifying individuals recognized face portions, eyes, as disclosed by Applicant's disclosure with the claim read in light of the specification) Okano et al. fail to specifically teach an inducing step of inducing the predetermined color change to occur in the eye portions of the image. Nesterov et al. teach an inducing step of inducing the predetermined color change to occur in the eye portions of the image. (Nesterov et al., Column 1 Lines 27 - 33, they disclose how certain, well-known, specific cameras are more susceptible to inducing red-eye portions. The use of one of the cameras as described by Nesterov et al. would be intentionally inducing the predetermined color change.) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Fuersich et al. to include the teachings of Okano et al. This modification would have been prompted because the use of face portions, particularly eye portions or a face, for individual recognition is notoriously well known. Some advantages of individual recognition/identification may be automatic annotation images and/or security based applications. Furthermore, It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of Fuersich et al. in view of

Okano et al. with the teachings of Nesterov et al. This modification would have been prompted because Nesterov et al. describe how cameras which induce red eye are well known, inexpensive and compact therefore one would be inclined to utilize such a camera because in Fuerisch et al. Paragraph 0053 they describe how it is difficult to ascertain if red portions are actual red-eye portions in images of faces taken from the front view in some instances. The camera(s) as disclosed by Nesterov et al. would be able to more effectively create the red-eye portions equally making it easier for the system of Fuerisch et al. to correct all red-eye images accordingly.

- With regards to claim 2, Fuerisch et al. in view of Okano et al. and further in view of Nesterov et al. teach the face recognition method according to claim 1. Fuerisch et al. teach wherein the detection step detects red-eye portions in the image. (Fuerisch et al., Page 5 Paragraph 0047 and 0050, Page 6 Paragraph 0052)

- With regards to claim 8, Fuerisch et al. in view of Okano et al. and further in view of Nesterov et al. teach the face recognition method according to claim 1. Fuerisch et al. teach wherein the detection step of detecting eye portions which have undergone a predetermined color change includes comparing a pixel value of the image data with a reference pixel value which corresponds to the predetermined color change. (Fuersich et al., Page 5 Paragraphs 0047 and 0050, Page 6 Paragraph 0052)
  
- With regards to claim 9, Fuerisch et al. in view of Okano et al. and further in view of Nesterov et al. teach the face recognition method according to claim 8. Fuerisch et al. teach wherein the reference pixel value is a red reference value or a gold reference value. (Fuersich et al., Page 5 Paragraphs 0047 and 0050, Page 6 Paragraph 0052)
  
- With regards to claim 10, Fuersich et al. teach in view of Okano et al. and further in view of Nesterov et al. teach the face recognition method according to claim 1. Fuersich et al. fail to teach wherein the predetermined color change is a gold-eye occurrence. Nesterov et al. teach wherein the predetermined color change is a gold-eye occurrence. (Nesterov et al., Column 1 Lines 15 – 28) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of Fuersich et al. in view of Okano et al. and further in

view of Nesterov et al. to include further teachings of Nesetrov et al. This modification would have been prompted because Nesterov et al. state that gold-eye occurrences can occur and create un-welcomed image qualities similar to red-eye. Therefore modifying Fuersich et al. to not only detect and correct for red-eye but gold-eye along with any other color that may be harmful to the quality of picture would have been obvious to increase the capabilities and range of photograph enhancement that Fuersich et al. could obtain.

- With regards to claim 20, Fuerisch et al. in view of Okano et al. and further in view of Nesterov et al. teach the face recognition method according to claim 1. Fuerisch et al. fail to teach wherein the identification step is performed when the eye portions which have undergone the predetermined color change are detected. Okano et al. implicitly teach wherein the identification step is performed when the eye portions which have undergone the predetermined color change are detected. (Okano et al., Column 11 Lines 18 – 25, if there are no eye portions in the input image then comparison cannot take place)
- With regards to claim 21, Fuerisch et al. in view of Okano et al. and further in view of Nesterov et al. teach the face recognition method according to claim 20. Fuerisch et al. fail to teach wherein the identification step



includes: searching for face images stored in a storage section that match a face in the recognized face portions; and acquiring identification information stored in the storage section which is associated with a matched face image. Okano et al. teach wherein the identification step includes: searching for face images stored in a storage section that match a face in the recognized face portions; (Okano et al., Column 11 Lines 1 - 61) and acquiring identification information stored in the storage section which is associated with a matched face image. (Okano et al., Column 11 Lines 1 - 61)

- With regards to claim 22, Fuerisch et al. in view of Okano et al. and further in view of Nesterov et al. teach the face recognition method according to claim 1. Fuerisch et al. fail to teach wherein the identification step is performed based on a result of the detection step, in which the eye portions which have undergone the predetermined color change are detected. Okano et al. implicitly teach wherein the identification step is performed based on a result of the detection step, (Okano et al., Column 11 Lines 18 – 25, if there are no eye portions in the input image then comparison cannot take place ) in which the eye portions which have undergone the predetermined color change are detected. (Okano et al., Column 11 Lines 18 – 25, if there are no eye portions detected in the input

image using the method of Fuerisch et al. then comparison cannot take place)

- With regards to claim 24, Fuerisch et al. in view of Okano et al. and further in view of Nesterov et al. teach the face recognition method according to claim 1. Fuerisch et al. fail to teach wherein the individual person is identified according to unique identification information which corresponds to the individual person. Okano et al. teach wherein the individual person is identified according to unique identification information which corresponds to the individual person. (Okano et al., Column 9 Line 66 – Column 10 Line 26)
  
- With regards to claim 27, Fuerisch et al. in view of Okano et al. and further in view of Nesterov et al. teach the face recognition method according to claim 1. Fuerisch et al. fail to specifically teach wherein the predetermined color change is induced intentionally in the inducing step. Nesterov et al. teach wherein the predetermined color change is induced intentionally in the inducing step. (Nesterov et al., Column 1 Lines 27 - 33, they disclose how certain, well-known, specific cameras are more susceptible to inducing red-eye portions. The use of one of the cameras as described by Nesterov et al. would be equivalent to intentionally inducing the predetermined color change.)

7. Claims 3, 6, 7, 11, 12, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuersich et al. U.S. Publication No. 2003/0044070 A1 in view of Chen et al. U.S. Publication No. 2002/0081032 A1 and further in view of Okano et al. U.S. Patent No. 6,404,903.

- With regards to claim 3, Fuersich et al. teach a method that recognizes face portions in an image based on image data of the image, comprising: a detection section which detects, in the image, eyes which have undergone a predetermined color change, based on the image data; (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050) and a recognition section which recognizes face portions in the image based on the eyes detected by the detection section, (Fuersich et al., Figs. 1A, 1B, & 1C, Page 6 Paragraph 0054) wherein the predetermined color change is induced to occur in the eyes of the image. (Fuerisch et al., Abstract, Page 5 Paragraph 0047 and Paragraph 0050, the predetermined color change is implicitly brought about in the eyes of the image since the entire disclosure of Fuerisch et al. is in regards to red-eye detection) Fuerisch et al. fail to teach a face recognition apparatus, which recognizes face portions in an image and an individual recognition section which identifies an individual person being photographed based on the face portions recognized in the image. Chen et al. teach a face recognition apparatus, which recognizes face portions in an image. (Chen et al. Fig. 1, Page 3 Paragraph 0091) Chen et al. fail to teach an individual recognition section which identifies an individual person being photographed based on the face portions recognized in the image. Okano et al. teach an individual recognition section which identifies an individual person being photographed based on the face portions recognized in the image. (Okano

et al., Abstract, Fig. 1, Fig. 2, Column 9 Lines 30-44, Okano et al. teach identifying individuals based on recognized face portions, eyes, as disclosed by Applicant's disclosure with the claim read in light of the specification) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Fuersich et al. with the teachings of Chen et al. This modification would have been prompted in order to employ the method as disclosed by Fuersich et al. in to real world practice effectively and efficiently. It would have been obvious to modify the combined teachings of Fuersich et al. in view of Chen et al. with the teachings of Okano et al. This modification would have been prompted because the use of face portions, particularly eye portions or a face, for individual recognition is notoriously well known. Some advantages of individual recognition/identification may be automatic annotation images and/or security based applications.

- With regards to claim 6, Fuersich et al. teach an image pickup apparatus which photographs a subject and generates photographic image data of a photographic image, comprising: a detection section that detects, in the photographic image, eye portions which have undergone a predetermined color change, based on the image data; (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050) a recognition section that recognizes face portions in the photographic image based on the eye portions detected by the detection section; (Fuersich et al., Figs. 1A, 1B, & 1C, Page 6 Paragraph 0054) a correction section that corrects the color change in the eye portions detected by the detection section; (Fuersich et al., Figs. 1A, 1B, & 1C, Page 6 Paragraph 0054) and wherein the predetermined color change is induced to occur in the eyes of the image. (Fuerisch et al., Abstract, Page 5 Paragraph 0047 and Paragraph 0050, the predetermined color change is implicitly brought about in the eyes of the image since the entire disclosure of Fuerisch et al. is in regards to red-eye detection) Fuersich et al. fail to teach an image pickup apparatus and a face image generating section that generates facial images by extracting, from the photographic image, the face portions which have been recognized by the recognition section and whose color change has been corrected by the correction section; an individual recognition section which identifies an individual person being photographed based on the generated facial images. Chen et al. teach an image pickup apparatus

(Chen et al., Column 3 Lines 54 – 67) and a face image generating step of generating facial images by extracting, from the image, the face portions which have been recognized in the recognition step and whose color change has been corrected in the correction step. (Chen et al. Page 4 Paragraph 0099 Lines 5 – 10) Chen et al. fail to teach an individual recognition section which identifies an individual person being photographed based on the generated facial images. Okano et al. teach an individual recognition section which identifies an individual person being photographed based in the generated facial images. (Okano et al, Abstract, Fig. 1, Fig. 2, Column 9 Lines 30-44, Okano et al. teach identifying individuals based on recognized face portions, eyes, as disclosed by Applicant's disclosure with the claim read in light of the specification) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Fuesich et al. with the teachings of Chen et al. This modification would have been prompted in order to create mugshot type images, which may be used in a variety of applications from biometric identification to saving storage space in memory. Also, Chen et al. disclose the image pickup apparatus, which is suggested by Fuersich et al. (Page 4 Paragraph 0040) that would have made it obvious to one of ordinary skill in the art at the time of the invention to include in their method in order to add functionality to the method effectively and efficiently in real world practice. It would have been

obvious to modify the combined teachings of Fuersich et al. in view of Chen et al. with the teachings of Okano et al. This modification would have been prompted because the use of face portions, particularly eye portions or a face, for individual recognition is notoriously well known. Some advantages of individual recognition/identification may be automatic annotation images and/or security based applications.

- With regards to claim 7, Fuersich et al. in view of Chen et al. and further in view of Okano et al. teach the image pickup apparatus according to claim 6. Fuersich et al. teach wherein the detection section detects red-eye portions in the image and the correction section corrects the red-eye portions detected by the detection section. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050) and the correction section corrects the red-eye portions detected by the detection section. (Fuersich et al., Figs. 1A, 1B, & 1C, Page 6 Paragraph 0054)



- With regards to claim 11, Fuersich et al. in view of Chen et al. and further in view of Okano et al. teach the face recognition apparatus according to claim 3. Fuersich et al. teach wherein the detection section which detects eyes which have undergone a predetermined color change, compares a pixel value of the image data with a reference pixel value which corresponds to the predetermined color change. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050)
  
- With regards to claim 12, Fuersich et al. in view of Chen et al. and further in view of Okano et al. teach the face recognition apparatus according to claim 11. Fuersich et al. teach wherein the reference pixel value is a red reference value or a gold reference value. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050)
  
- With regards to claim 17, Fuersich et al. in view of Chen et al. and further in view of Okano et al. teach the face recognition apparatus according to claim 6. Fuersich et al. teach wherein the detection section that detects eyes which have undergone a predetermined color change, compares a pixel value of the image data with a reference pixel value which corresponds to the predetermined color change. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050)

- With regards to claim 18, Fuersich et al. in view of Chen et al. and further in view of Okano et al. teach the face recognition apparatus according to claim 17. Fuersich et al. teach wherein the reference pixel value is a red reference value or a gold reference value. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050)

8. Claims 4, 5 and 14 - 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuersich et al. U.S. Publication No. 2003/0044070 A1 in view of Chen et al. U.S. Publication No. 2002/0081032 A1 and further in view of Okano et al. U.S. Patent No. 6,404,903 and further in view of Nesterov et al. U.S. Patent No. 6,980,691.

- With regards to claims 4 and 5, Fuerisch et al. teach a face extraction method for extracting face portions from an image and generating facial images based on image data of the image, comprising: a detection step of detecting, in the image, eye portions which have undergone a predetermined color change, based on the image data; (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050) a recognition step of recognizing face portions in the photographic image based on the eye portions detected in the detection step; (Fuersich et al., Figs. 1A, 1B, & 1C, Page 6 Paragraph 0054) a correction step of correcting the color change in the eye portions detected in the detection step. (Fuersich et al.,

Figs. 1A, 1B, & 1C, Page 6 Paragraph 0054) Fuerisch et al. fail to teach a face image generating step of generating facial images by extracting, from the image, the face portions which have been recognized in the recognition step and whose color change has been corrected in the correction step; an identification step of identifying an individual person being photographed based on the generated facial images; and an inducing step of inducing the predetermined color change to occur in the eye portions of the image. Chen et al. teach a face image generating step of generating facial images by extracting, from the image, the face portions which have been recognized in the recognition step and whose color change has been corrected in the correction step. (Chen et al. Page 4 Paragraph 0099 Lines 5 – 10) Chen et al. fail to teach an identification step of identifying an individual person being photographed based on the generated facial images; and an inducing step of inducing the predetermined color change to occur in the eye portions of the image. Okano et al. teach an identification step of identifying an individual person being photographed based on the generated facial images. (Okano et al., Abstract, Fig. 1, Fig. 2, Column 9 Lines 30-44, Okano et al. teach identifying individuals based on recognized face portions, eyes, as disclosed by Applicant's disclosure with the claim read in light of the specification) Okano et al. fail to specifically teach an inducing step of inducing the predetermined color change to occur in the eye portions of

the image. Nesterov et al. teach an inducing step of inducing the predetermined color change to occur in the eye portions of the **image**. (Nesterov et al., Column 1 Lines 27 - 33, they disclose how certain, well-known, specific cameras are more susceptible to inducing red-eye portions. The use of one of the cameras as described by Nesterov et al. would be intentionally inducing the predetermined color change.) **It would** have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Fuesich et al. with the teachings of Chen et al. This modification would have been prompted in order to create mugshot type images which may be used in a variety of applications from biometric identification to saving storage space in memory. It would have been obvious to modify the combined teachings of Fuesich et al. in view of Chen et al. with the teachings of Okano et al. This modification would have been prompted because the use of face portions, particularly eye portions or a face, for individual recognition is notoriously well known. Some advantages of individual recognition/identification may be automatic annotation images and/or security based applications. Finally, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of Fuesich et al. in view of Chen et al. in view of Okano et al. with the teachings of Nesterov et al. This modification would have been prompted because Nesterov et al. describe how cameras which induce red eye are well known, inexpensive

and compact therefor one would be inclined to utilize such a camera because in Fuerisch et al. Paragraph 0053 they describe how it is difficult to ascertain if red portions are actual red-eye portions in images of faces taken from the front view in some instances. The camera(s) as disclosed by Nesterov et al. would be able to more effectively create the red-eye portions equally making it easier for the system of Fuerisch et al. to correct all red-eye images accordingly.

- With regards to claim 14, Fuersich et al. in view of Chen et al. in view of Okano et al. and further in view of Nesterov et al. teach the face extraction method according to claim 4. Fuersich et al. teach wherein the detection step of detecting eye portions which have undergone a predetermined color change includes comparing a pixel value of the image data with a reference pixel value which corresponds to the predetermined color change. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050)
  
- With regards to claim 15, Fuersich et al. in view of Chen et al. in view of Okano et al. and further in view of Nesterov et al. teach the face extraction method according to claim 14. Fuersich et al. teach wherein the reference pixel value is a red reference value or a gold reference value. (Fuersich et al., Page 5 Paragraph 0047 and Paragraph 0050)

- With regards to claim 16, Fuersich et al. in view of Chen et al. in view of Okano et al. and further in view of Nesterov et al. teach the face extraction method according to claim 4. Fuersich et al. fail to teach wherein the predetermined color change is a gold-eye occurrence. Nesterov et al. teach wherein the predetermined color change is a gold-eye occurrence. (Nesterov et al., Column 1 Lines 15 – 28) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of Fuersich et al. in view of Chen et al. further in view of Okano et al. and further in view of Nesterov et al. to include further teachings of Nesterov et al. This modification would have been prompted because Nesterov et al. state that gold-eye occurrences can occur and create un-welcomed image qualities similar to red-eye. Therefore modifying Fuersich et al. to not only detect and correct for red-eye but gold-eye along with any other color that may be harmful to the quality of picture would have been obvious to increase the capabilities and range of photograph enhancement that Fuersich et al. could obtain.

9. Claims 13, 19, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuersich et al. U.S. Publication No. 2003/0044070 A1 in view of Chen et al. U.S. Publication No. 2002/0081032 A1 further in view of Okano et al. U.S. Patent No. 6,404,903 as applied to claims 3 and 6 above, and further in view of Nesterov et al. U.S. Patent No. 6,980,691.

- With regards to claim 13, Fuerisch et al. in view of Chen et al. further in view of Okano et al. teach the face recognition apparatus according to claim 3. Fuersich et al. fail to teach wherein the predetermined color change is a gold-eye occurrence. Nesterov et al. teach wherein the predetermined color change is a gold-eye occurrence. (Nesterov et al., Column 1 Lines 15 – 28) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of Fuerisch et al. in view of Chen et al. further in view of Okano et al. to include the teachings of Nesetrov et al. This modification would have been prompted because Nesterov et al. state that gold-eye occurrences can occur and create un-welcomed image qualities similar to red-eye. Therefore modifying Fuersich et al. to not only detect and correct for red-eye but gold-eye along with any other color that may be harmful to the quality of picture would have been obvious to increase the capabilities and range of photograph enhancement that Fuersich et al. could obtain.

- With regards to claim 19, Fuersich et al. in view of Chen et al. further in view of Okano et al. teach the face recognition apparatus according to claim 6. Fuersich et al. fail to teach wherein the predetermined color change is a gold-eye occurrence. Nesterov et al. teach wherein the predetermined color change is a gold-eye occurrence. (Nesterov et al., Column 1 Lines 15 – 28) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of Fuersich et al. in view of Chen et al. further in view of Okano et al. to include the teachings of Nesterov et al. This modification would have been prompted because Nesterov et al. state that gold-eye occurrences can occur and create un-welcomed image qualities similar to red-eye. Therefore modifying Fuersich et al. to not only detect and correct for red-eye but gold-eye along with any other color that may be harmful to the quality of picture would have been obvious to increase the capabilities and range of photograph enhancement that Fuersich et al. could obtain.
  
- With regards to claim 25, Fuersich et al. in view of Chen et al. further in view of Okano et al. teach the image pickup apparatus according to claim 6. Fuersich et al. fail to specifically teach an apparatus further comprising: an image taking lens; and a flash unit which emits a flash during a photography operation and is disposed on the face recognition apparatus in a proximity to the image taking lens which induces the predetermined



color change in the eyes to occur. Nesterov et al. teach an apparatus further comprising: an image taking lens; (Nesterov et al., Column 1 Lines 27 - 33) and a flash unit which emits a flash during a photography operation and is disposed on the face recognition apparatus in a proximity to the image taking lens which induces the predetermined color change in the eyes to occur. (Nesterov et al., Column 1 Lines 27 - 33) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combined teachings of Fuersch et al. in view of Chen et al. and further in view of Okano et al. with the teachings of Nesterov et al. This modification would have been prompted because Nesterov et al. describe how cameras which induce red eye are well known, inexpensive and compact therefore one would be inclined to utilize such a camera because in Fuersch et al. Paragraph 0053 they describe how it is difficult to ascertain if red portions are actual red-eye portions in images of faces taken from the front view in some instances. The camera(s) as disclosed by Nesterov et al. would be able to more effectively create the red-eye portions equally making it easier for the system of Fuersch et al. to correct all red-eye images accordingly.

- With regards to claim 26, Fuersch et al. in view of Chen et al. in view of Okano et al. and further in view of Nesterov et al. teach the image pickup apparatus according to claim 25. Fuersch et al. fail to specifically teach

wherein the flash unit is disposed on the face recognition apparatus directly above and in alignment with the image taking lens, and the proximity of the flash unit to the image taking lens induce the predetermined color change in the eyes during a photography operation. Nesterov et al. teach wherein the flash unit is disposed on the face recognition apparatus directly above and in alignment with the image taking lens, (Nesterov et al., Column 1 Lines 27 - 33) and the proximity of the flash unit to the image taking lens induce the predetermined color change in the eyes during a photography operation. (Nesterov et al., Column 1 Lines 27 - 33)

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 1, 4-5, 20 and 21 have been considered but are moot in view of the new ground(s) of rejection.
11. Applicant's arguments filed 15 January 2009 have been fully considered but they are not persuasive. On page 12 of the remarks Applicant's Representative argues with respect to claim 20 that Fuersich et al. do not teach "the identification step is performed when the eye portions which have undergone the predetermined color change are detected" because Fuersich et al. is not precluded from finding eye-candidates without the predetermined color change. The Examiner asserts that the claim language itself does not limit the identification step to *only* being performed *when* the color change takes place. On pages 13 and 14 of the remarks Applicant's Representative argues with

respect to claim 21 that the Examiner incorrectly relied upon Okano et al. to teach identifying individuals based on a face in a recognized face portions. The Examiner respectfully disagrees and asserts that the claim reads, "searching for face images stored in a storage section that match a face in the recognized face portions". The Examiner asserts that the eyes of an individual are appropriately relied upon to be the recognized face portions which are used to find matching faces in a storage database. The Examiner also disagrees with the Applicant's Representatives assertion that the instant application discloses a matching based upon faces. The Examiner looked into the instant applications disclosure and paragraph 0107 as directed and could not find support for the matching taking place with the use of the face, the application discloses using the recognized face portions and not the entire face. On page 15 of the remarks Applicant's Representative argues claims 3 and 6 for similar reasons as claim 1 but the claims include different claim language. The Examiner asserts that with respect to claims 3 and 6 Fuersch et al. disclose "wherein the predetermined color change is induced to occur in the eye portions of the image." The Examiner asserts that Fuersch et al. teach in their Abstract and Page 5 Paragraph 0047 and Paragraph 0050, that "the predetermined color change is induced to occur in the eye portions of the image." With regards to Fuersch et al. the predetermined color change is implicitly brought about, induced, in the eyes of the image since the entire disclosure of Fuersch et al. is in regards to red-eye detection, the eyes are where the predetermined color change has been brought about, i.e. induced.

***Allowable Subject Matter***

12. Claim 23 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC RUSH whose telephone number is (571)270-3017. The examiner can normally be reached on 7:30AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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